TUR PLANNING OVERVIEW

Using Toxics Use Reduction Planning to Minimize TURA/TRI Reporting Obligations

Reporting Workshop – May 12, 2022

TURI
TOXICS USE REDUCTION INSTITUTE
UMASS LOWELL

The Toxics Use Reduction Institute

Analyze the policy implications of chemicals use in MA

Train professionals in toxics use reduction planning to help facilities reduce their use of toxics

Provide technical and financial support to help companies achieve TUR success

Provide key research to:

- Assess the performance of safer industrial parts cleaning alternatives
- Develop safer alternatives

Work with community groups to reduce toxics at the local level

TURI Supports Development of Safer Alternatives

Academic Research Leads to New Solutions

Industry Research Develops Reliable Options

Grants Support Process Changes

Alternatives Assessment Reports Spread Knowledge

Tools Facilitate Discovery and Evaluation of Options

Massachusetts Toxics Use Reduction

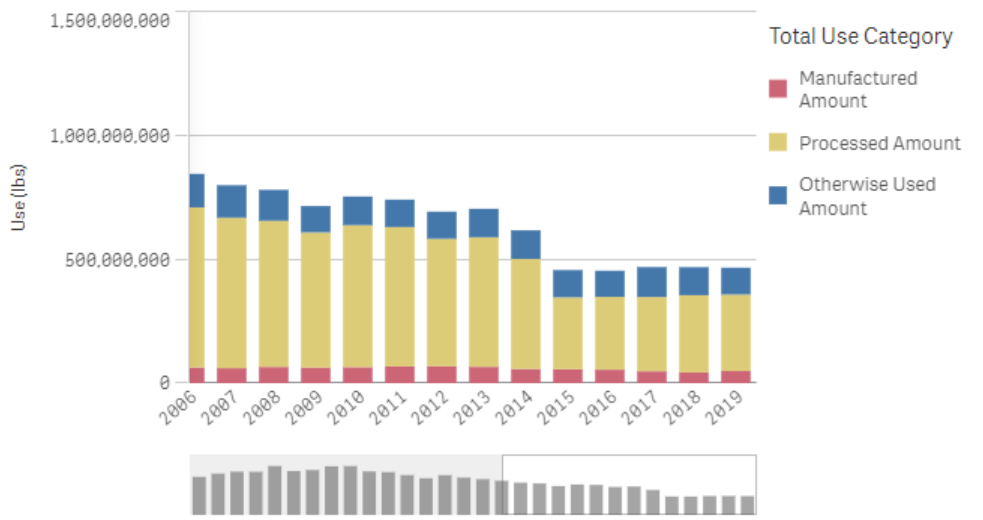
Using the TURA Data Online

www.turadata.org/extensions/TURA_Dashboard

Home | Community Search | Facility Search | Chemical Search | Facilities Map | Data Detail

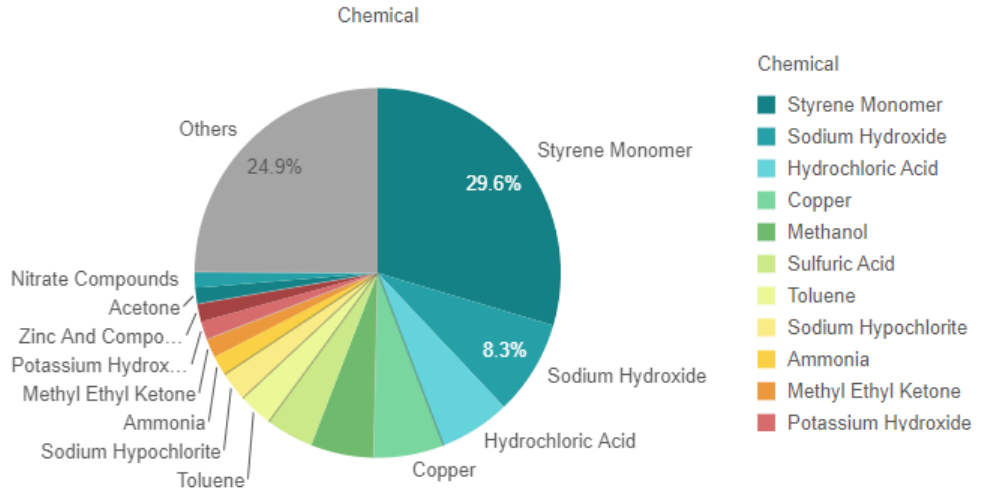
Reporting Year

Total Use by Year

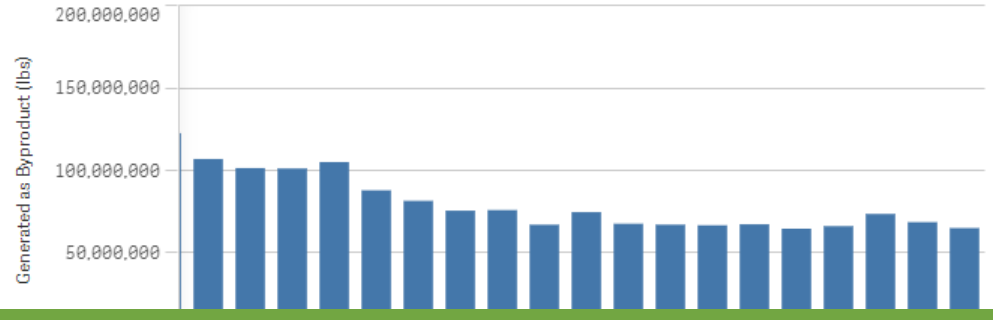


Total Use by Chemical

All Reporting Years;

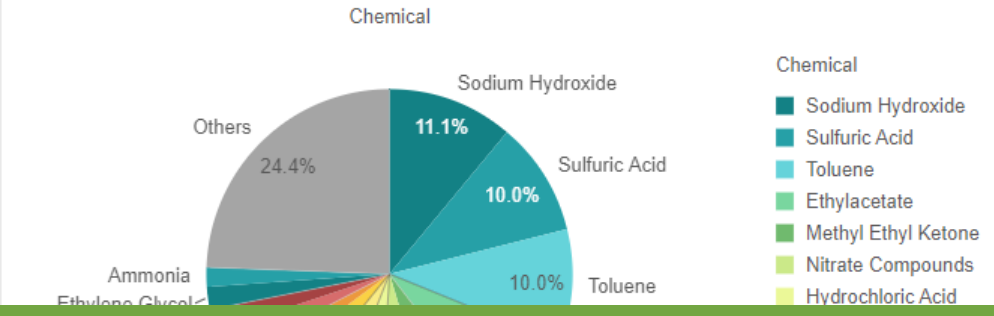


Total Generated as Byproduct by Year

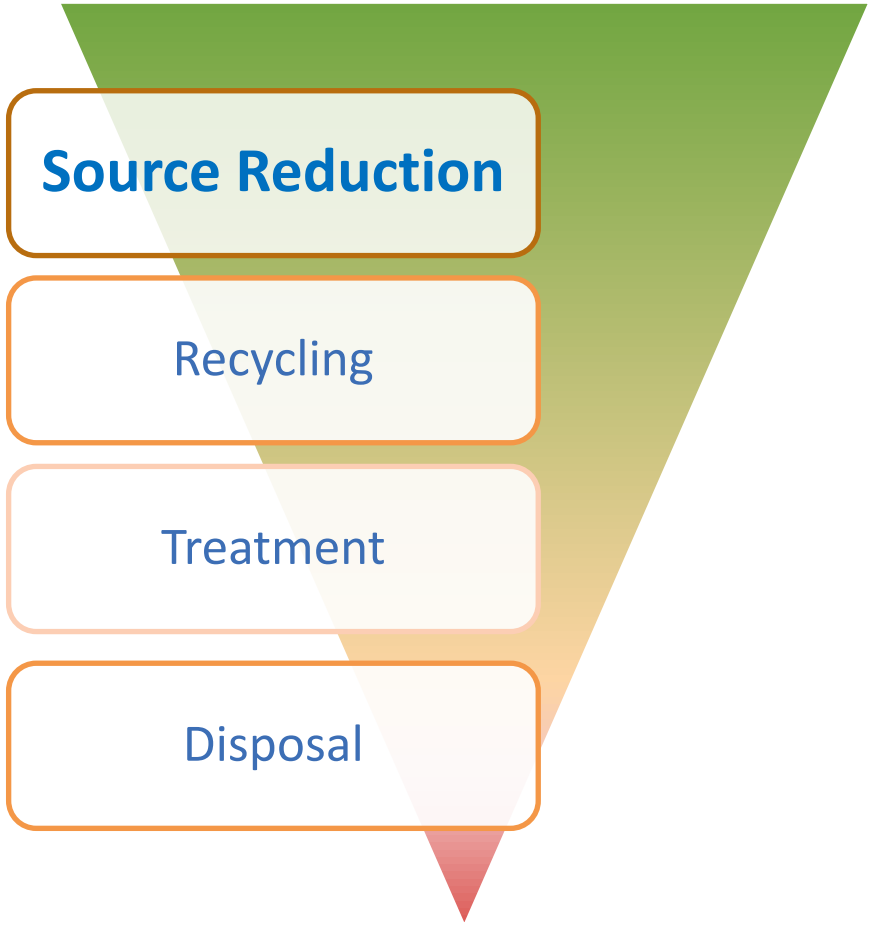


Total Byproduct by Chemical

All Reporting Years;



Core Principles of Toxics Use Reduction



Reduce toxics at the source (use-based analysis)

Focus on inherent hazard of chemicals used

Identify suite of opportunities to eliminate or reduce hazard

Implement affordable and effective opportunities

WHO HAS TO DO A PLAN

Companies reporting at least one (1) chemical this reporting year that meets the following conditions:

It was reported in at least one prior reporting year	It will have to be reported in the coming reporting year

PLANNING OPTIONS

Toxics Use Reduction Plan, OR

If One (1) Plan and 2 Updates Completed, THEN

- RESOURCE CONSERVATION PLAN
  - Allowed every OTHER planning cycle thereafter

OR

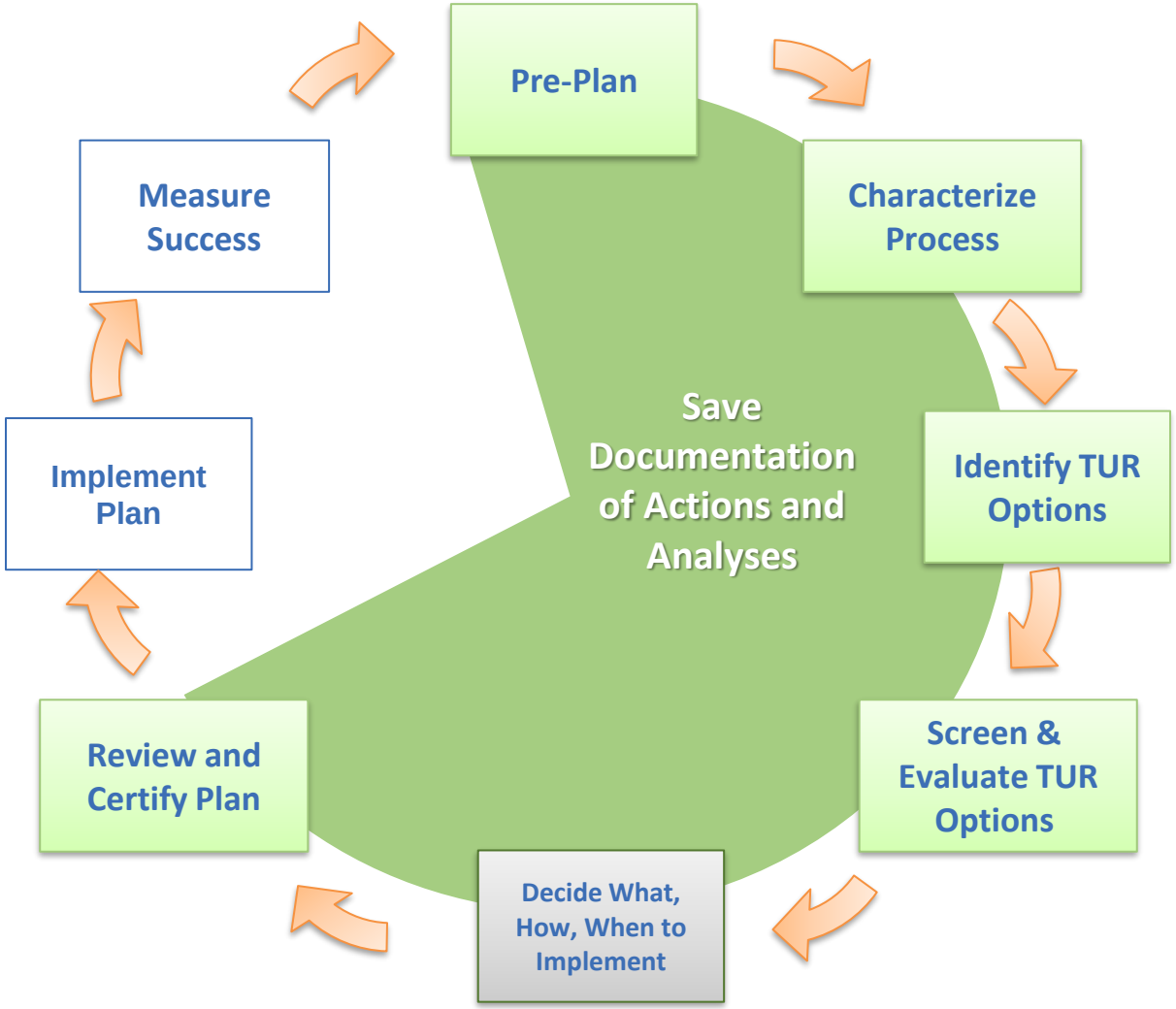
- ENVIRONMENTAL MANAGEMENT SYSTEM

PLAN DUE DATE and APPROVAL

- Complete By July 1, 2022
- Only Complete if Certified by a MassDEP Approved Toxics Use Reduction Planner
  - Can be company employee (i.e., Limited Practice Planner) or outside consultant (i.e., General Practice Planner)
    - TUR Planner list is on DEP website
      - https://eeaonline.eea.state.ma.us/Portal/#!/search/permits/results?Program=TOXIC%20USE%20REDUCTION
  - TUR Planner must determine if plan meets regulatory requirements

310 CMR 50	Requirements to become a Certified Planner		General Practice TUR Planner	Limited Practice TUR Planner
52 (1)	Employment Experience		7 years' full-time employment in specified fields is required for all TUR Planners, with the following education substitutions possible:	
52 (3)	Educational Substitution for Employment Experience *(Educational program must be concentrated in specified fields)*		• Vocational/tech certificate: 1 year • Relevant Associate's Degree: 2 years • Bachelor's Degree, concentration directly related to TUR: 4 years • Bachelor's Degree, concentration indirectly related to TUR: 3 years • Master's or Doctorate, concentration directly related to TUR: 5 years • Master's or Doctorate, concentration indirectly related to TUR: 4 years	
54	Certification as a TUR Planner	Exam-track Procedure	Successful completion of the TUR Planner certification course and passing the exam are both required; Cost = $2,000	Successful completion of the TUR Planner certification course and passing the exam are both required; Cost = $630
55		Through Experience in TUR Activities	Not applicable	2 full years' experience in TUR activities OR 1 ½ years' experience in TUR activities plus successful completion of the TUR Planner Certification Course
53 (3)	Certification /Recertification Fee		$500	$100
58	Continuing Education	First recertification	30 CE Credits	24 CE Credits
		Subsequent recertifications	24 CE Credits	20 CE Credits

TUR Planning is an Iterative Process – Not a Once-And-Done Exercise



TUR PLAN SECTIONS

Facility-Wide Portions

(Required for all Facilities)

- Management Policy
- Scope
- Employee Notification
- Plan Summary
- Plan Certification

IF THE FACILITY'S ONLY REPORTABLE CHEMICAL USE IS FOR WASTE TREATMENT, ONLY FACILITY-WIDE PLANNING APPLIES

Production Unit Portions:

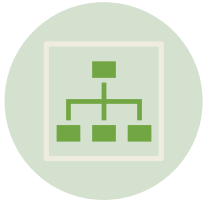
(For each chemical and each production unit in which it is used)

- Process Characterization
- TUR Options Identification
- TUR Options Technical Evaluation
- Cost of Using Chemical
- TUR Option Economic Evaluation
- Implementation Decision and Plan

EMPLOYEE NOTIFICATION MUST:

Happen by January 1 of Planning Year

Identify Production Units



Describe Planning Criteria / Requirements

Solicit TUR Suggestions

Be Described in Plan

MANAGEMENT POLICY CONTENTS

How facility/policies encourage TUR

Other optional information, e.g., role of TUR in:

- Hiring, salaries, promotions
- Research and Development
- Capital investment decisions

SCOPE CONTENTS

Production unit descriptions – Process, product, unit of product, chemicals

TUR Options identification process

TUR Options identified

TUR Options decisions and implementation plan

Projected changes in use and byproduct by production unit and chemical

PROCESS CHARACTERIZATION (1 FOR EACH PRODUCTION UNIT)

PROCESS DESCRIPTION

- Production Unit Number and Unit of Product
- Process Flow Diagram:
  - EACH processing step including treatment and recycling
  - Entry and exit point of each reportable chemical as product or byproduct

For Plan Updates:

Revise to reflect changes.

If no changes, note that in Plan

PROCESS CHARACTERIZATION continued

For each reportable chemical used in the production unit:

- ITS PURPOSE
- TOTAL AMOUNTS and AMOUNTS PER UNIT OF PRODUCT used, generated as byproduct and transferred or released in prior calendar year
- BYPRODUCT FATE: amounts released on-site, treated on-site and off-site, recycled on-site and off-site, and disposed of on-site and off-site in prior calendar year

OPTIONS IDENTIFICATION
(for each production unit/chemical combination)

Consider all 6 TUR Methods

- Input Substitution
- Product Reformulation
- Production Unit Redesign/Modification
- Production Unit Modernization
- Improved operation and maintenance
- Recycling integral to the production process

OPTIONS IDENTIFICATION
continued

For Plan Updates:

Include all options considered but rejected in prior planning cycles

Describe options identification process

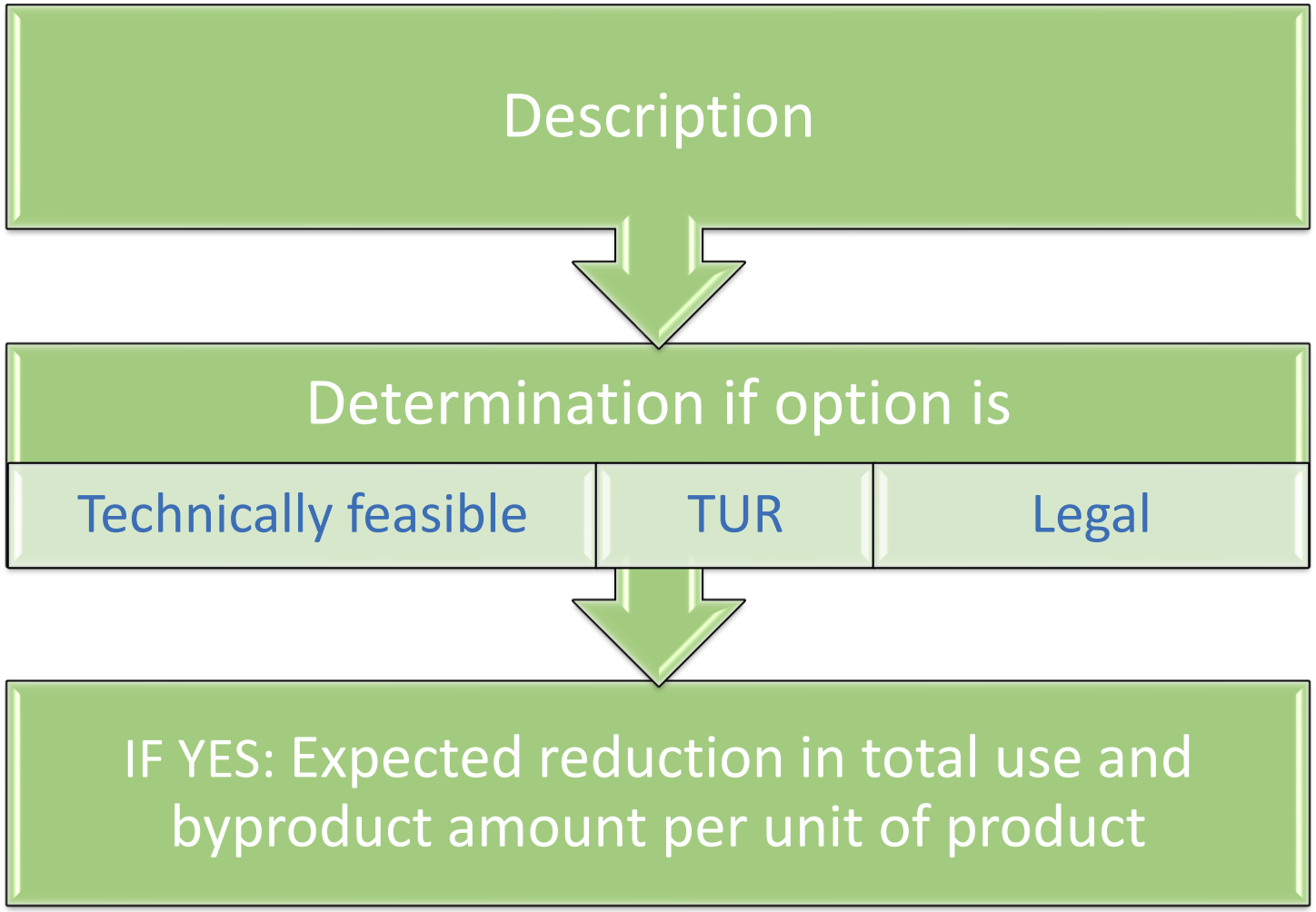
List personnel involved

Describe information sources consulted

Describe information gathering techniques

List all options identified as “potentially achieving” TUR

TECHNICAL EVALUATION



FOR PLAN UPDATES:

- Review technical infeasibility determination made for options rejected in prior years.
- Update use and byproduct information for technically feasible options rejected in prior years

TECHNICAL EVALUATION

- Good faith
- Standard engineering practices
- Document analysis
- Document rationale for decision

COST OF TOXICS

FOR PLAN UPDATES:

Update cost of toxics assessment with current information

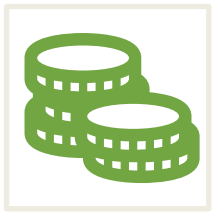
If technically feasible options identified, calculate the FULL cost of using chemical in the production unit

- Direct and Indirect Costs of Purchase, Treatment and Disposal, Worker Health and Safety, Compliance, Potential Liability, Customer Good Will/Market Share, Insurance Costs, etc.
- See Planning Guidance for full list of cost elements that must be considered

If NO technically feasible options: List all *relevant* costs

ECONOMIC ANALYSIS (OF TECHNICALLY FEASIBLE OPTIONS)

Cost of Implementing Option



Savings from Reduced Chemical Costs

Analysis is complete when there is sufficient information to make a good faith implementation decision

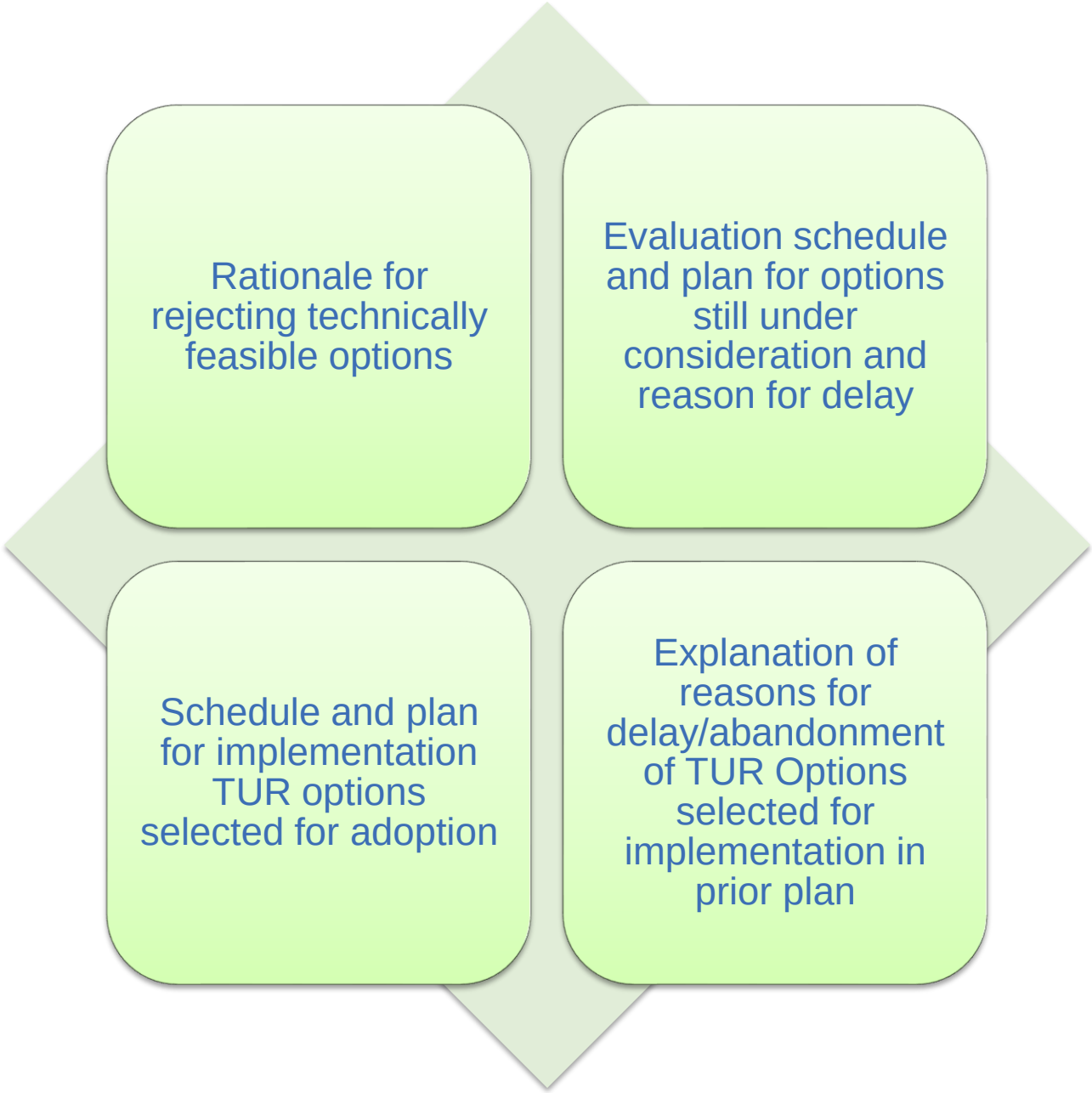
FOR PLAN UPDATES:

- Update economic analysis of previously rejected technically feasible options

ECONOMIC ANALYSIS

- Good faith
- Standard accounting practices,
- Company's standard business decision making and investment rules
- Document analysis
- Document rationale for decisions

IMPLEMENTATION PLAN



PLAN SUMMARY CONTENTS

For each chemical

- Description of TUR Options considered
- Description of TUR Options selected for implementation in this plan
- Reason why any TUR Options selected in the prior planning cycle weren't implemented as planned (if any)
- Projected facility-wide change in Use and Byproduct for the following calendar year

Facility senior manager certification

TUR Planner certification

SENIOR MANAGER CERTIFICATION STATEMENT

I certify under penalty of law that the following is true:

a) I have personally examined and am familiar with this toxics use reduction plan;

b) I am satisfied that any supporting documentation used in the development of the plan exists and is consistent with the plan;

c) Based on my inquiry of those individuals immediately responsible for the development of this plan, I believe that the information in the plan and any supporting documentation used in the development of the plan is true, accurate, and complete;

d) The plan, to the best of my knowledge and belief, meets the requirements of 310 CMR 50.40;

e) I am aware that there are penalties for submitting false information, including possible fines and imprisonment.

TUR PLANNER CERTIFICATION STATEMENT

Based on my independent professional judgment as a toxics use reduction planner, I certify under penalty of law that the following is true:

a. I have examined and am familiar with this toxics use reduction plan;
b. The plan satisfies the requirements of 310 CMR 50.40; and
c. The plan demonstrates a good faith and reasonable effort to identify and evaluate toxics use reduction options.

Toxics Use Reduction Act 2006 Amendments

Developed to provide options for MA companies who have been engaged in TUR Planning for multiple cycles and are finding limited options

Designed to provide flexibility and new opportunities for companies to integrate TUR into their overall operations

Facilities that have completed one TUR Plan and at least two Plan Updates may choose to:

- Continue with Toxics Use Reduction Plan Updates;
- Develop a Resource Conservation Plan;
- Implement a TURA Environmental Management System

What is Resource Conservation?

An action that

- Decreases the use or consumption of a natural asset such as water, energy, or raw material, or
- Increases the efficiency of the use of the assets,

Without

- Increasing risk to the public including workers and consumers, or the environment, or
- Increasing the amount of waste generated.

RC Focuses on “Natural Assets”

- Natural Assets include:
  - Energy
  - Water
  - Materials contributing to solid waste
  - Chemicals not otherwise reportable

Use RC Planning to Address Other Chemicals Used at Your Facility

Toxic substances exempt from TURA reporting

- Listed substances below reporting threshold or exempt from planning
  - E.g., chemicals not reportable in previous year, R&D and other exempt operations
- Non-listed chemicals
- Toxics and other chemicals in exempt uses

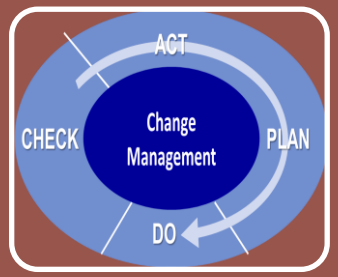
Toxics substances used in articles and products

- Non-production activities
- Incorporated into, but not processed, your products

Who's Eligible for a TURA EMS?

1 + 2

Company has completed its initial TUR Planning and two subsequent Plan Updates



In place for at least one full EMS cycle (P-D-C-A)

Has undergone an independent EMS audit within last two years

Required Elements of a TURA EMS

1. Environmental Policy
2. Aspects and Impacts
3. Legal Requirements
4. Objectives and Targets
5. Environmental Management Programs
6. Roles and Responsibilities
7. Training
8. Communication
9. Operational Controls
10. Documentation and Document Control
11. Emergency Preparedness and Response
12. Monitoring and Measuring
13. Audits and Corrective Action
14. Management Review

TURA EMS Requirements

1

Identify all TURA covered toxics as significant aspects

2

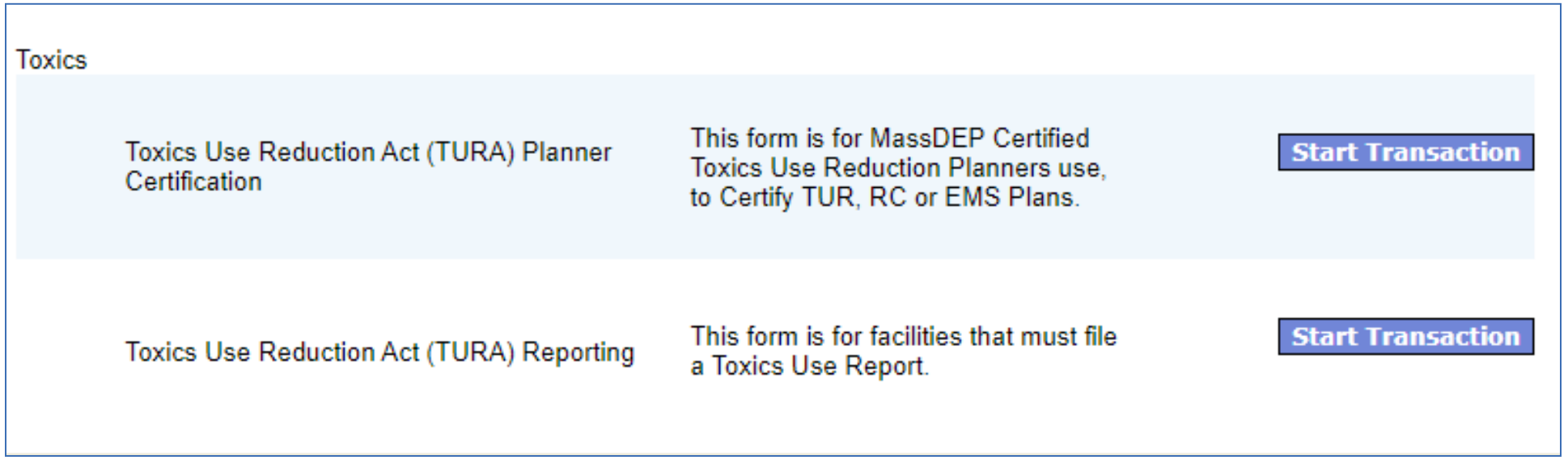
Cover all production units identified in your most recent TUR report

3

Include all TURA EMS elements

Using eDEP for Planning Submittals

- Planner Certification, TUR Reporting and TUR/EMS/RC Planning are done using distinct and separate transactions



Remember

- Source reduction is at the core of toxics use reduction planning
- There are eligibility requirements for Planners
  - Limited Practice (in-house)
  - General Practice (external)
- All TUR Plans must address the required elements
- Alternative planning options exist

The Massachusetts Toxics Use Reduction Institute

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